REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claims 1, 2, and 16 are amended. The revisions to claims 1, 2, and 16 are supported, for example, at page 6, lines 13-28 and page 7, line 3 through page 8, line 18 in the specification. Claims 1-9 and 11-21 are pending, with claims 1, 12, and 16 being independent.

As requested by the Examiner, the title of the invention has been amended.

The Examiner has asserted that Applicants have not yet perfected priority by submitting a certified copy of the foreign application. *See* Office Action at page 2. Applicants respectfully point out that the current application is derived from a PCT national stage filing and therefore, Applicants do not need to submit a certified copy of the priority application.

Drawing objection

The drawings have been objected to by the Examiner. Proposed drawing corrections, designating Figure 10 as "Prior Art", are attached.

Claim rejections - 35 U.S.C. § 102

Claims 1-4, 9, and 16 stand rejected as being anticipated by U.S. Patent No. 5,608,695 (Yamazaki). Applicants respectfully traverse this rejection.

Independent claims 1 and 16 are directed to an optical semiconductor device and an optical information processing device, respectively. Each of claims 1 and 16 recites that an emitted beam dividing portion includes a first diffraction grating region for generating a main beam, and second and third diffraction grating regions for generating sub beams. Also, a signal-detecting photodetector element receives a beam that is obtained by diffracting the reflected beams of the main beam with the reflected beam dividing portion and then diffracting the obtained zero order diffracted beam with the first diffraction grating.

By this arrangement, the first diffraction grating functions to generate the main beam and also to diffract the reflected beam so as to enter into the signal-detecting photodector element. This provides a number of benefits. For example, a high efficiency utilization of the reflected light beam permits a reduction in the light receiving area of the photodetector element. This, in

turn, reduces the capacitance associated with the photodetector element, and helps to ensure a high-speed response of the reproduction signals. In addition, a reduction in size of the light receiving area of the photodetector element improves a S/N ratio by reducing the incidence of stray light components upon the photodetector element. See, for example, page 3, lines 15-26.

Yamazaki is directed to an optical pickup apparatus. Yamazaki, however, fails to teach or suggest an emitted beam dividing portion including three diffraction grating regions for generating a main beam and two sub beams. For example, hologram **28b** does not have the above structure of the claimed emitted beam dividing portion, including three diffraction grating regions. See, for example, col. 4, lines 35-49.

Accordingly, Applicants respectfully submit that claims 1 and 16 are allowable over the cited reference. In addition, claims 2-4 and 9 depend from claim 1, and are believed allowable for at least the same reasons.

Claim rejections - 35 U.S.C. § 103

Claim 5 stands rejected as being obvious over Yamazaki in view of U.S. Patent No. 4,918,679 (Opheij). Applicants respectfully traverse this rejection.

Claim 5 depends from allowable claim 1, which is allowable over Yamazaki for the reasons discussed above. Orpheij does not remedy the deficiencies of Yamazaki. Accordingly, Applicants therefore submit that claim 5 is allowable over the cited references for the same reasons as claim 1. Applicants do not concede the correctness of this rejection.

Claims 6-8 stand rejected as being obvious over Yamazaki in view of U.S. Patent No. 4,665,310 (Heemskerk). Applicants respectfully traverse this rejection.

Claims 6-8 depend from allowable claim 1, which is allowable over Yamazaki for the reasons discussed above. Heemskerk does not remedy the deficiencies of Yamazaki. Accordingly, Applicants therefore submit that claims 6-8 are allowable over the cited references for the same reasons as claim 1. Applicants do not concede the correctness of this rejection.

Claim 11 stands rejected as being obvious over Yamazaki in view of Japanese patent document JP 10-134395 (Miyazaki). Applicants respectfully traverse this rejection.

Claim 11 depends from allowable claim 1, which is allowable over Yamazaki for the reasons discussed above. Miyazaki does not remedy the deficiencies of Yamazaki. Accordingly,

Applicants therefore submit that claim 5 is allowable over the cited references for the same reasons as claim 1. Applicants do not concede the correctness of this rejection.

Claims 12 and 13 stand rejected as being obvious over Yamazaki in view of U.S. Patent No. 5,111,449 (Kurata). Applicants respectfully traverse this rejection.

Independent claim 12 is directed to an optical element. A first optical element is provided on one surface of a transparent member and includes first and second diffraction gratings. A second optical element is provided on the other surface of the transparent member and divides a reflected light beam into light beams in different focused states. The first and second diffraction gratings are juxtaposed in a first direction, and gratings of the first diffraction grating are arranged in a direction different from the first direction. By having first and second diffraction gratings, the first optical element can function to both generate a main beam and to diffract a beam that is reflected from the second optical element.

Yamazaki does not teach or suggest a first optical element including a first and second diffraction grating and a second optical element provided on the other side of a transparent member. Accordingly, Yamazaki does not teach or suggest a structure (first optical element) that is capable of generating functioning to both generate a main beam and to diffract a beam reflected from the second optical element.

Kurata does not remedy the deficiencies of Yamazaki. Kurata simply discloses various configurations of diffraction gratings. However, it would not have been obvious to modify Yamazaki to have a first optical element with different diffractive gratings.

Accordingly, Applicants submit that claim 12 is allowable over the cited references. In addition, claim 13 depends from claim 12, and is believed allowable for at least the same reasons.

Claim 14 stands rejected as being obvious over Yamazaki, Kurata, and further in view of Opheij. Applicants respectfully traverse this rejection.

Claim 14 depends from allowable claim 12, which is allowable over Yamazaki and Kurata for the reasons discussed above. Orpheij does not remedy the deficiencies of Yamazaki and Kurata. Accordingly, Applicants therefore submit that claim 14 is allowable over the cited references for the same reasons as claim 12. Applicants do not concede the correctness of this rejection.

Claim 15 stands rejected as being obvious over Yamazaki, Kurata, and further in view of Heemskerk. Applicants respectfully traverse this rejection.

Claim 15 depends from allowable claim 12, which is allowable over Yamazaki and Kurata for the reasons discussed above. Heemskerk does not remedy the deficiencies of Yamazaki and Kurata. Accordingly, Applicants therefore submit that claim 15 is allowable over the cited references for the same reasons as claim 12. Applicants do not concede the correctness of this rejection.

Claims 17-21 stand rejected as being obvious over Yamazaki in view of U.S. Patent No. 5,881,043 (Hasegawa). Applicants respectfully traverse this rejection.

Claims 17-21 depend from allowable claims 1 and 16, which are allowable over Yamazaki for the reasons discussed above. Hasegawa does not remedy the deficiencies of Yamazaki. Accordingly, Applicants therefore submit that claims 17-21 are allowable over the cited references for the same reasons as claims 1 and 16. Applicants do not concede the correctness of this rejection.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested.

Respectfully submitted,

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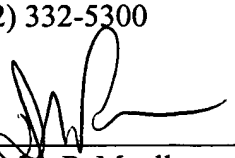
Date: September 21, 2004



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Reg. No. 30,300
DPM:DTL

PRIOR ART

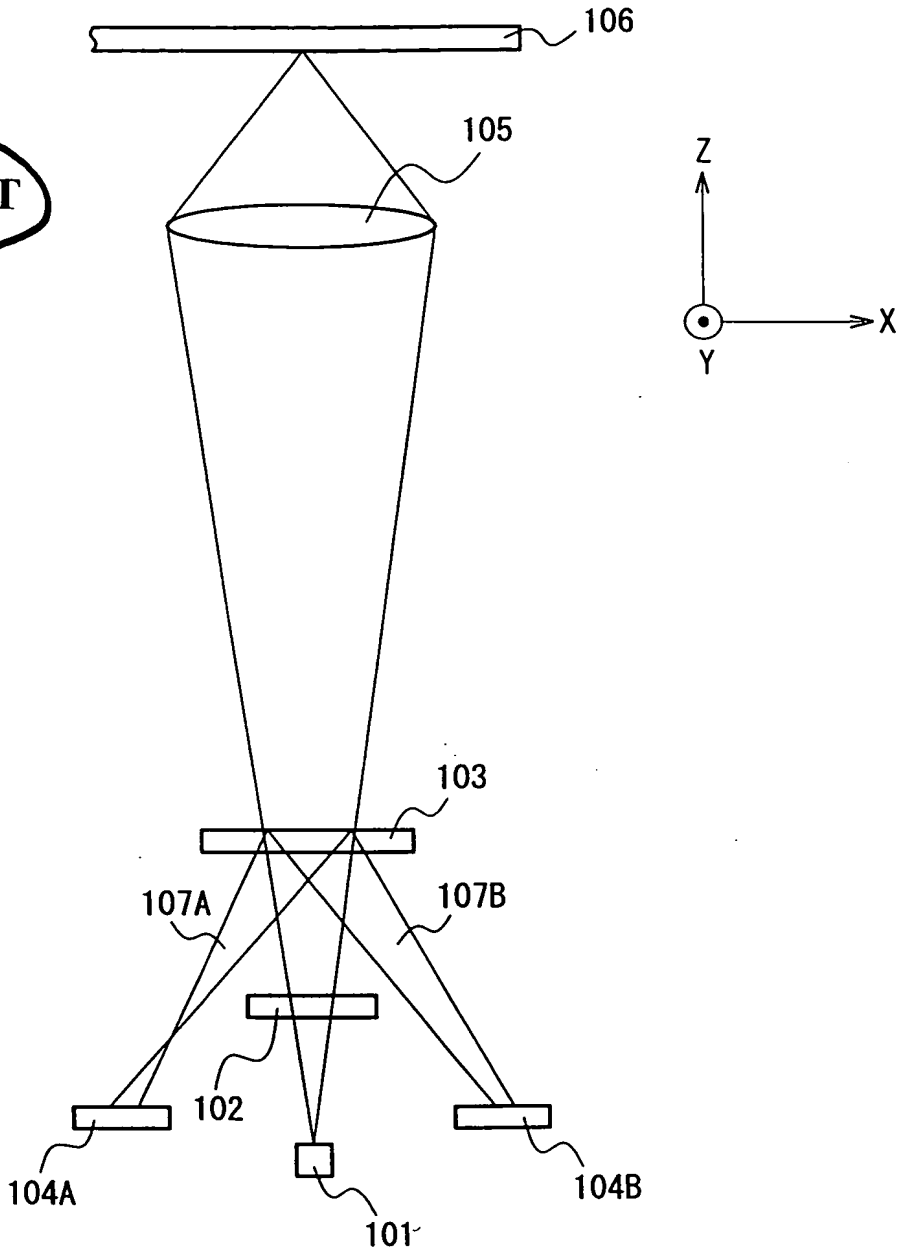

FIG. 10